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# Supreme Court of the United States

NEW YORK SCAFFOLDING COMPANY,  
*Petitioner,*

vs.

CHAIN BELT COMPANY AND EGBERT  
WHITNEY,  
*Respondents.*

October

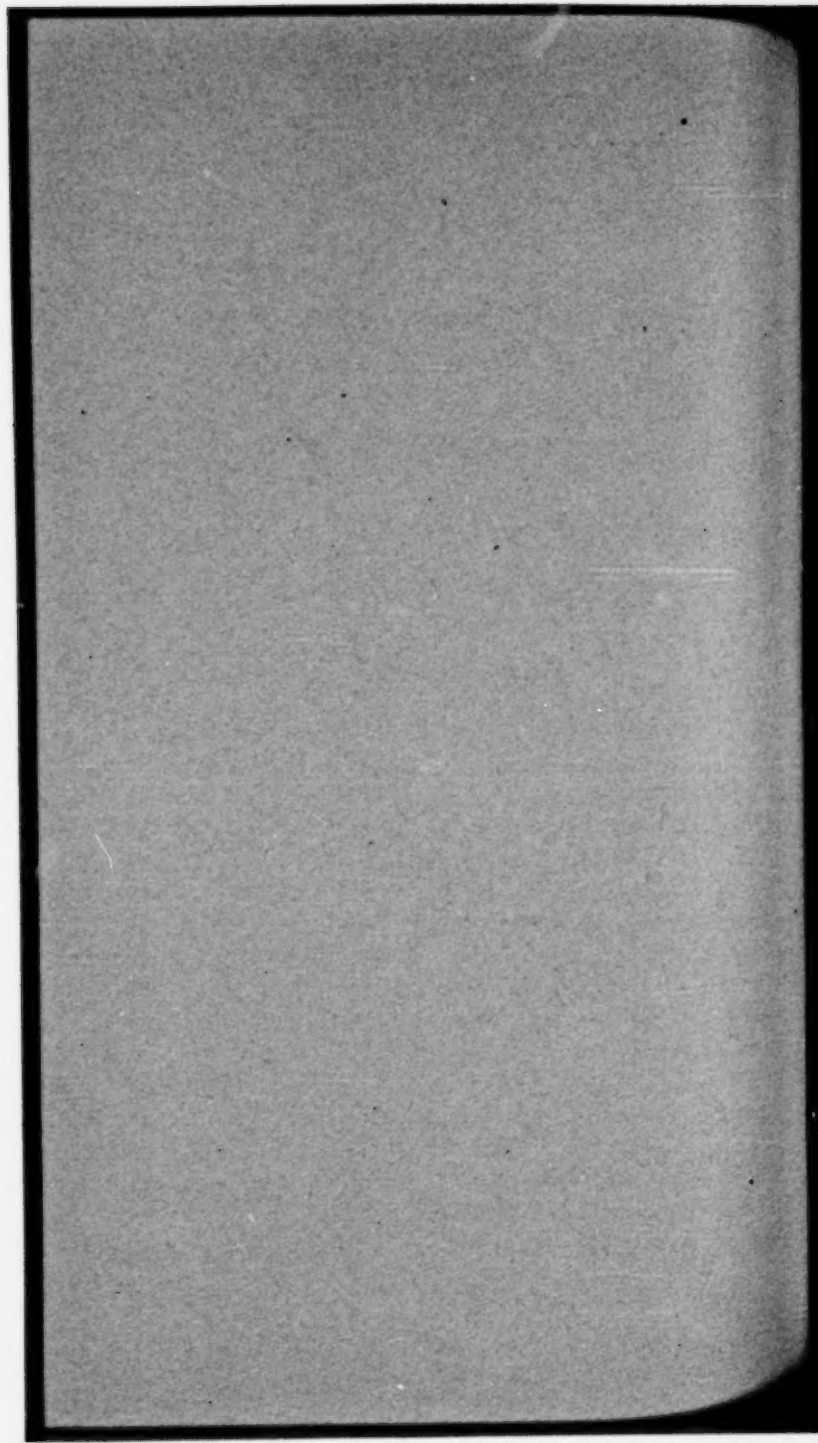
Term, 1917-1918

No. 2

## BRIEF FOR PETITIONER

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NEW YORK SCAFFOLDING COMPANY,  
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October  
Term, 1917.  
No. 713.

## **BRIEF FOR PETITIONER.**

### ***Statement.***

This cause comes before this Court on Writ of Certiorari to the United States Circuit Court of Appeals for the Seventh Circuit, issued out of this Court on the 23rd day of November, 1917 (record, p. 275).

The petitioner, the New York Scaffolding Company, being the owner by assignment of Letters Patent issued to Elias H. Henderson on May 24, 1910, under No. 959,008 for an Improved Scaffold Supporting Device, brought suit in the U. S. District Court for the Eastern District of Wisconsin, on the 26th day of August, 1915, against the Chain Belt Company, one of the respondents, for contributory infringement of Claims 1 and 3 of the said Henderson Patent (record, page 2).

On the 11th day of September, 1915, the respondent Chain Belt Company filed its answer to the Bill of Complaint herein, and denied infringement, alleging (a) lack

of invention, and (b) anticipation of the device of the patent in suit.

On the 24th day of March, 1916, Egbert Whitney, the other respondent herein, filed a petition for leave to intervene for the reason:

“That the devices which the defendant is making, and which the plaintiff is charging it with infringement in this suit, have been made by the direct order of your petitioner, for use in connection with his business in supplying scaffolding machines and equipment to contractors and builders throughout the United States” (p. 27).

On the 27th day of April, 1916, a proposed supplemental and additional bill of complaint was filed in the District Court (p. 49), charging infringement of the patent in suit by the respondents, the Chain Belt Company and Egbert Whitney, in manufacturing and selling hoisting devices, one known as the “Whitney Scaffold Hoist,” and the other as the “Little Wonder.”

On the 29th day of April, 1916, an order was entered giving the petitioner leave to file such supplemental and additional bill of complaint (p. 53).

*The respondent Whitney, after intervening, made no answer to the original Bill of Complaint, but on the 8th day of May, 1916, a joint and several answer was filed by both respondents, Chain Belt Company and Egbert Whitney, to the supplemental and additional Bill of Complaint (p. 55), wherein the respondents admitted making the devices known as the “Whitney Scaffold Hoist” machine and the “Little Wonder” hoisting machine, and admitted that the respondent Whitney agreed to defend and indemnify the Chain Belt Company against any loss that might be suffered in consequence of infringement by said company of the Henderson patent in suit.*

In that answer the respondent Whitney does not set up that the Henderson patent is invalid, or that there was any lack of novelty or invention therein, or that the patent had been anticipated in any respect.

On the trial of the case in the District Court the respondents attempted to show prior use by petitioner, and at the end of the trial respondents were permitted to file "a joint and several amendment, to their joint and several answers heretofore filed herein," (p. 57) and such an amendment was filed June 1st, 1916, alleging:

"that the device disclosed and claimed in the Henderson Patent No. 995,008 was known to and publicly used in the United States by the following: New York Scaffolding Company, New York City, at Chicago, Ill.; Patent Scaffolding Company, New York City, at Chicago, Ill.; Patent Scaffolding Company of Chicago, Ill., at Chicago, Ill.; George A. Fuller Co., Chicago, Ill., at Chicago, Ill.; Louis Labelle, Chicago, Ill., at Chicago, Ill., prior to the date of said invention of Elias H. Henderson."

But nowhere in any of the pleadings in this case has the defendant Whitney set up any defense to the validity of the patent, except in such "amendment to their joint and several answers."

After the trial and consideration of the issues in the case had been had, an opinion was delivered by the trial judge, Hon. F. A. GEIGER, (p. 247) holding that claims 1 and 3 of the patent in suit were valid, and had been infringed by the "Whitney Scaffold Hoist" and by the "Little Wonder" machines, and on the 3rd day of June, 1916, an interlocutory decree was entered, ordering, adjudging and decreeing, that Claims 1 and 3 of the Henderson Patent are good and valid, that said claims have been infringed by the respondents, by making, selling and ship-

ping certain scaffold hoisting machines known as "Whitney Scaffold Hoist" machines and "Little Wonder" machines, that an accounting be had, and that a perpetual injunction issue, and that the petitioner recover costs of the action.

An appeal to the Circuit Court of Appeals for the Seventh Circuit was allowed the respondents on the 10th of June, 1916 (p. 252), and the case coming on to be heard at the October Term of said Court, an opinion was filed in that Court (p. 265), holding Claims 1 and 3 of the Henderson Patent valid, and that said claims had been infringed by the respondents, in making, selling and shipping "Whitney Scaffold Hoist" machines, but not in the manufacture, sale or use of the "Little Wonder" machine, and to that extent reversed the decree of the District Court with directions to enter a decree in accordance with the opinion of the Circuit Court of Appeals.

The question of the correctness of this holding in reversing the District Court is now before this Honorable Court.

### ***The Henderson Patent In Suit.***

The Henderson patent in suit relates to builders' scaffolds carried by cables supported on outriggers secured to the upper part of a steel skeleton structure of a building being erected, such scaffolds being generally referred to as "suspended scaffolds," as they are suspended along the partially completed building under course of construction to enable the masons to provide masonry walls or shells exterior to the steel skeleton structures. They support not alone the masons and other workmen, but bricks, stone, mortar or cement, and such implements as are appurtenant thereto, as wheelbarrows, cement boxes, mortar mixers, etc. Such scaffolds provide a gangway about 4 or 5 feet wide and run along the length of the

building, and sometimes continuous around the corners and along on two or three or even four sides of the building under construction. Very often such suspended scaffolds have parts at one story or level and other parts at another story or level, depending on the progress made by the masons along the sides of the building. The patented scaffolds permit such adaptation to the progress made, and provide at the same time an efficient and secure means for the masons, when twenty, thirty or more stories above the level of the ground.

In Fig. 1 of the Patent (record, p. 326) projecting bars designated as outriggers 2 are attached to the upper part or steel skeleton of the building, and cables 3 have their upper ends attached to those outriggers, and their lower ends co-operating with a hoisting device, having drums 10 journaled in a U-shaped frame 6, the lower end of which is formed in the shape of a *stirrup*. Cross-pieces 7 have their two ends *laid in the stirrup of a pair of* such U-shaped frames and thus extend from one machine to another. Planks 8 are placed on the cross-beams and are supported thereby, to form the platform upon which the masons work. The platform, cross-beams, and the frames are together raised or lowered by means of the hoisting devices on the U-shaped frames, and in the embodiment of the patent, a crank 15 operates the drum 10 of each hoisting device.

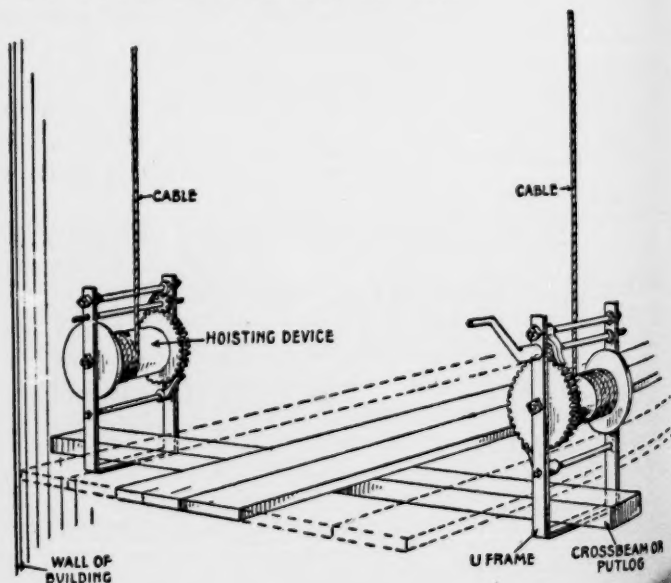
To constitute a mason's platform, it is necessary to have a number of outriggers, extending outward from the building, as is shown in Fig. 1, and each outrigger supports two cables, an inner and outer cable, which co-operate respectively with an inner and outer hoisting device, that supports the opposite ends of the cross bars or putlogs 7, which in turn support the platform planks or platform.

The specification lays particular stress on the lower or *stirrup end of the U-shaped frame 6 that holds the end of the cross piece or putlog 7*. Thus on page 1 of the specification line 62 it is stated:

“As indicated in Fig. 2, the frame 6 of each hoisting machine is so formed as to *pass around the end of the cross-piece 7 used to support the platform of the scaffold 5.*”

The detail construction of each hoisting machine is more clearly shown by reference to Figs. 5 and 6. Each of such mechanisms consists of a frame 6, preferably of bar iron, *bent into the shape of a “U” and “when so formed adopted to pass around and support one end of the cross-pieces 7 referred to above.”*

This may be clearly shown in the following diagram, showing one pair of frames with a cross-beam or putlog in loose jointed or hinged connection therewith, and with platform planks on the putlog, viz.:



It is stated in the patent, page 1, line 33: "It is an object of my invention to construct such a hoisting mechanism in such a manner that it results *in a maximum degree of security and a minimum cost of production*," and after describing the construction of the device and referring specifically several times to the fact that the frame 6 of the hoisting machine is so formed as *to pass around the end* of a cross-piece 7, the patentee states, page 2, line 10, "From the above it will be seen that my construction *secures the greatest possible amount of security*, since the frame 6 *passes around* the supporting beams of the scaffold in such a way that no auxiliary means are required to secure the hoisting mechanism to the scaffold."

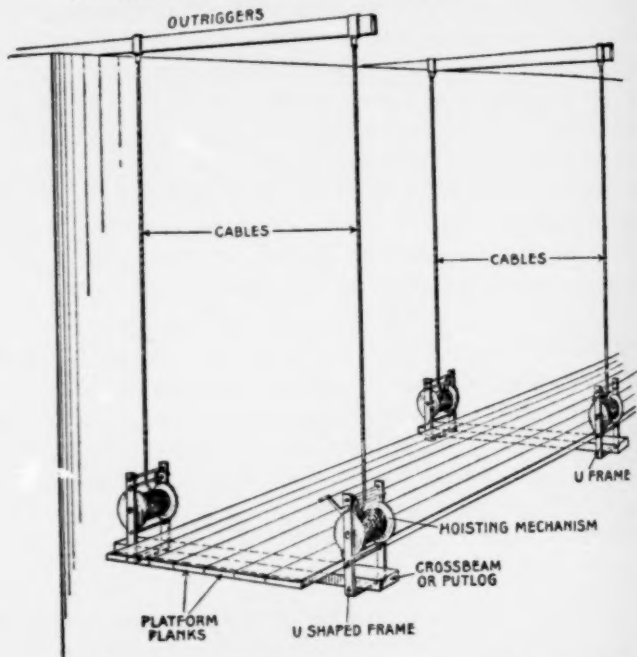
So we find it stated, repeated and reiterated in the specification that because the lower end of the U-shaped frame is adapted *to pass around and support* one end of the cross-pieces, no auxiliary means are required to secure the hoisting mechanism to the scaffold, and therefore, "My construction *secures the greatest possible amount of security*."

Claims 1 and 3 of the Henderson Patent are in issue. Those claims read as follows:

"1. A scaffold consisting in the combination of cross beams, floor pieces extending between such beams, and a hoisting device associated with each end of each beam, each hoisting device consisting of a continuous U-shaped metal bar extending around the under side of and upward from the associated

beam, and a hoisting drum rotatably supported by the side members of such bar.

(Diagram to assist in reading the claims.)



"3. A scaffold consisting of a plurality of U-shaped bars arranged in pairs, a cross beam laid in and extending between each pair of such U-shaped bars, a floor laid upon said cross beam, a drum rotatably supported between the upwardly extending side members of each of said U-shaped bars, and means of controlling the rotation of said drum."

Each of the claims in issue requires a platform supported by at least *two* cross-beams, and *four* hoisting devices, because the cross-beams or putlogs extend trans-

versely at the ends of the floor pieces or platform planks and a hoisting device is associated with each end of each cross-beam. Claim 1 requires the frame of the hoisting device to *extend around the under side of and upward* from the cross-beam, and Claim 3 requires the cross-beam to be *laid in* the U-shaped bars of the hoisting device.

Such a mason's suspended platform usually has as many as ten to twenty outriggers, extending outwardly from the building, and as many cross-beams, and a *pair* of hoisting devices for each outrigger and each cross-beam or putlog. There are about five to seven wooden planks laid side by side transversely over and across each cross-beam or putlog, and these planks extend from cross-beam or putlog to putlog, and as the lengths of the planks are about ten feet, new sets of planks for the continuation of the platform are provided. The outriggers, and in consequence the cross-beams or putlogs suspended therefrom, are placed along the wall of the building distanced from each other about the length of the platform planks, so that the ends of the platform planks rest on the cross-beams or putlogs.

### ***The Advantages of the Henderson Structure.***

The patent does not purport to go into details as to all of the conditions and circumstances in which "security" is obtained by the use of the device of the patent in suit; nor is it necessary or proper that a specification should partake of the nature of a trade circular "puffing" the structure illustrated in the patent, as a tradesman might do in a circular. It is sufficient under the law that a patentee describe and illustrate his invention so clearly that a person skilled in the art will be able to make and use the same.

Inventors, moreover, as a rule, are not always qualified to point out all of the advantages that can be derived from using their invention, and in many instances new advantages appear after the device has been in use for some time, and after a patent has been obtained. As was said by this Court in *Diamond Rubber Company v. Consolidated Company*, 220 U. S., 428:

**"And how can it take from his merit that he (the Patentee) may not know all the forces which he has brought into operation? It is certainly not necessary that he understand or be able to state the scientific principles underlying his invention, and it is immaterial whether he can stand a successful examination as to the speculative ideas involved, *Andrew v. Cross*, 8 Fed. Rep., 269; *Eames v. Andrews*, 122 U. S., 40, 55; *St. Louis Stamping Co. v. Quinby*, 16 Off. Gaz., 135; *Dixon Wood Co. v. Pfeifer*, 55 Fed. Rep., 390; *Cleveland Foundry Co. v. Detroit Vapor Stove Co. (C. C. A., Sixth Circuit)*, 131 Fed. Rep., 853; *Van Epps v. United Box Co. (C. C. A., Second Circuit)*, 143 Fed. Rep., 869; *Westmoreland Specialty Co. v. Hogan (C. C. A., Third Circuit)*, 167 Fed. Rep., 327. He must, indeed, make such disclosure and description of his invention that it may be put into practice. In this he must be clear. He must not put forth a puzzle for invention or experiment to solve, but the description is sufficient if those skilled in the art can understand it. This satisfies the law, which only requires as a condition of its protection that the world be given something new and that the world be taught how to use it. *It is no concern of the world whether the principle upon which the new construction acts be obvious or obscure, so that it inheres in the new construction.*"**

Some of the advantages of the structure of the Henderson Patent in suit were presented to the Patent Office by

Henderson's attorneys when the Henderson application was before the Examiner (page 193):

"It is the primary requisite of a device of the class to which this invention relates that it be *secure*, and all efforts are directed in this behalf. In a claim of parts between a primary support and the scaffold upon which a workman stands a number of connections are necessarily employed, and it follows that the security of the device will vary inversely as the number of members in such a chain. Each connection employed makes another danger point, if such it may be termed, and it is the object of applicant's invention to make a desirable construction, so far as hoisting mechanism is concerned, *secure enough to be practical and worthy of confidence*. Claim 1 specifies that the U-shaped metal bar *extends around the under side of the beam*, while the ends thereof extend upwardly. Thus the connection between the U-shaped bar and the cross beam is *absolute and positive*, and no connecting rivets, bolts or other auxiliary means are employed. Hoisting mechanism is mounted *directly between the ends which thus extend from the beam, and the desirable security is thus effectively realized*."

It is obvious that where the frame 6 of each hoisting machine is so formed as *to pass around the end* of a cross-piece 7, that such a construction presents a *loose jointed connection*, or hinge or stirrup connection between the lower U-shaped end of the frame 6 and the cross-pieces or putlogs; and while the advantages of that loose-jointed or hinge connection are not specifically elaborated upon in the patent, they are clearly evident therefrom and inherent in the structure thereof and appear in the testimony of practical men of the art.

When masons are engaged on such a suspended scaffold, extending a considerable distance from the level of

the ground, the men at one end of the scaffold frequently progress in their work quicker than the men at the other end of the scaffold. Therefore, one end of the scaffold is raised higher than the other end. The witness French, who has been in the equipment business, handling contractors' equipment and scaffolds for fifteen years (p. 82) testified:

"110 Q. Is it common or not common to have one end of the wall raised by the bricklayers or masons, quicker than another part of the wall?

A. Quite frequently you see a scaffold when in use on a building, when some portions of the scaffold is practically a story higher than the other portions."

And frequently the crossbeams or putlogs themselves have one end higher than the other, whereby the putlogs are on a tilt:

"111 Q. Does it happen also on these scaffold devices that the platforms are raised at different heights—speaking now of the length of the putlog. We were just speaking about the length of the platform. Turn to the putlog itself. Does it happen that the machines are raised or lowered at different heights in respect to the end of the putlogs, so as to tilt the putlogs? Does that happen?

A. Yes, sir.

111½ Q. Frequently, or infrequently?

A. Frequently."

And this flexibility longitudinally and also transversely of the platform or scaffold is due to the loose joint connection between the U-shaped frames and cross-beams:

"112 Q. What can you say about the use of these U-shaped frames like this one which is plaintiff's Exhibit No. 15, during the last two or three years, in the construction of high buildings?

*The U-shaped frame machine with the loose connection, enables the operator to raise the scaffold machines one at a time, allowing the putlogs to tip or hinge over the support of the U-frame, leaving the machine standing erect at all times."*

The witness Cavanagh who has been a scaffold rigger since 1904, testified, page 68:

"90 R. D. Q. In actual practice does it happen that one end of the platform is higher than the other?

A. Yes, at times *I have seen scaffold, one end would be on the seventh floor and the other end on the sixth floor.*

That flexibility has the further advantage that it permits the putlogs to be *inclined* as it gives the masons a better foothold thus making their work easier:

96 R. D. Q. We were speaking before about the length of the platform. Now I am asking you in the direction of the putlog if it is customary to have them horizontal or not.

A. It all depends. *Some of the masons like the scaffold two or three inches higher on the outside than the inside; it gives them a better chance to lean towards the wall."*

Referring to the advantage of this loose or free-jointed *stirrup connection* between the frame 6 and the putlog of the scaffolding, the witness Cavanagh testified in relation to a modification of the embodiment shown in the patent in suit, having this loose jointed connection (page 67):

"79 R. D. Q. Are the bolts that pass through the two putlogs and not on the U-shaped frames tightly drawn?

A. No.

80 R. D. Q. How are they?

A. They are put in *loosely to give it hinge connection.*

81 R. D. Q. And what are the advantages of this hinge connection?

A. By having both drums loose on the putlog *you can raise one drum at least a foot to 16 inches higher than the other; the drum will still set parallel and let the cable ride straight across the drum.*

82 R. D. Q. Why is it necessary to have the cable ride straight across the drum?

A. *To protect our cable.*

83 R. D. Q. How protect the cable?

A. If the cable does not ride straight backward and forward across the drum, one will ride across the other, on top of the other and *crush our cable.*

84 R. D. Q. You mean the top layers on the drum will lie on the bottom cable of the drum?

A. Not at all times. That don't take all the cable off, the bottom layer might be straight, but as you wind up one layer *it will cross the other if not hanging straight.*

86 R. D. Q. Is there any danger of the cable rubbing against the cheeks of the drum and what effect if any would that have upon the cable?

A. *If the cable is rubbed, it would break the strand of the cable.*

97 R. D. Q. In what respect does the hinging connection permit the tilting of the putlog?

A. You can raise the outside drum three inches higher than the inside *without throwing the outside drum out of level.*

98 R. D. Q. Just what do you mean by throwing the drum out of level?

A. As you raise the outside *the machine won't tilt from side to side and make the cable ride unevenly.*

99 R. D. Q. You mean the hinge connection permits the cable *to ride easily on the drum?*

A. Exactly.

Thus, the loose-joint connection not alone permits flexibility of the platform throughout, but permits at the same time, the drum to so adjust itself in respect to the cable that the cable is wound in a proper manner on the drum.

It has been shown by this testimony that the proper winding is a very important feature, since if not wound properly, the strands of the cable would be crushed, and if the cable rubs against the cheek of the drum, the strands *will break*.

These are highly important considerations since any weakening of the cable would create a panic among the masons on the platform in their effort to reach a safe place, and any breaking of the cable might cause the scaffold to drop with the men, from twenty or more stories.

Cavanagh further says (p. 69):

100 R. D. Q. If the putlog was *entirely rigid*, would that be possible?

A. *You would have to raise both drums at the same time.*

101 R. D. Q. On the winding of *only one*?

A. On the winding of only one complete machine.

\* \* \* \* \*

118 R. D. Q. And in these cases of the U-shaped frame platform, on what did the putlogs rest?

A. On the frame.

119 R. D. Q. What are the advantages of the U-shaped hinge connection type, which rests on the frame, as you say, over the overhead type?

A. The U-shaped frame machine would *never get out of level*, that is, they could work it either two inches high or low up the face of the building.

120 R. D. Q. To what are these U-shaped frames with hinged connection now used?

A. Very near all the buildings being put up *throughout New York State*, so far as I know.

121 R. D. Q. Do you go out of New York State sometimes?

A. Quite often.

122 R. D. Q. To what states?

A. Boston, Montreal, Philadelphia, Washington, Baltimore, all down through Connecticut.

123 R. D. Q. And in these other states to what extent are the U-shaped frames with hinged connections used, so far as the rigging is concerned?

A. Very near all places, up through Connecticut and buildings going up in Philadelphia *won't use anything else but our machine.*"

This demand of the masons is due, we submit, to the efficient, safe, and at the same time flexible adaptation inherent in the scaffolds described, and speaks louder than volumes of testimony for the invention first disclosed to the public by the patent in suit. The prior art was open to the trade, but "they won't use anything but our machine."

This art, prior to Henderson's time, had not produced a scaffolding device in which a plurality of pairs of hoisting machines were attached to a builders' scaffold or platform *by a loose jointed or flexible connection*, which was not only absolutely secure, but which enabled the platform to be raised or lowered at its four corners, so to say, independently of each other, or which permitted the outside of the platform to be raised independently of the inside, or one end of the platform, independently of the other.

In addition to the advantages referred to, the Henderson construction permits the hoisting machine to be arranged with their *broad side parallel* with the wall of a building, and in that way take up *considerably less room* on the scaffold than would be required if the machines were arranged with the frames at right angles

to said building, and any freedom from obstruction of any kind in a scaffold of that character manifestly adds to the security of the men working on the platform and adds to the ease of carrying on their daily labors.

Judge GEIGER, in the District Court, in passing upon the patent in suit, said (record, p. 247):

“Henderson pressed on the Patent Office what now seems to be an entirely simple matter, and the Patent Office allowed him a patent; *thus getting away from the idea of a fixed and rigid platform.* He presented features which I think are novel, conducive to simplicity, and to quite an extent safety.”

Judge SANBORN, in delivering the opinion of the Circuit Court of Appeals in the Eighth Circuit, 224 Fed. 452 in a suit brought by the petitioner against one of the respondents, Egbert Whitney, in referring to the advantages of the Henderson construction stated (record, p. 6):

“The desideratum sought by Henderson was a simple, economical and efficient hoisting device and the frame therefor *to enable workmen constructing large buildings to raise and lower the scaffolds on which they were working* from their stations thereon, so constructed and combined with the cross pieces and floor pieces of the scaffold that the hoisting device and frame *would not obstruct any portion of the platform* of the scaffold, and that the combination of the hoisting device and its frame with the cross pieces and the floor pieces should be detachable without removing rivets or fastening of cross pieces to the frame, or of the floor pieces to the cross pieces, to the end that *the combination could be easily and quickly knocked down, removed and set up again in another place.*”

Again he said on page 8:

“Henderson’s method of combination made the use of scaffolds in the construction of large buildings *easier, more economical and more efficient* than those of prior methods, in that it avoided obstruction of the scaffolds by the hoisting devices, their frames or their cranks, shortened the cross pieces necessary to support the floor pieces of the scaffolds by the difference between twice the breadth and twice the thickness of the hoisting devices and their frames, and that it *enables the workmen to knock down, move and again set up the scaffolds*, hoisting devices and frames without unfastening and again riveting together cross pieces and hoisting frames *or handling in one cumbersome whole a cross piece riveted to two frames bearing their hoisting devices.*”

Again he says on page 12:

“The distinguishing characteristic of Henderson’s combination, *the new location and method of combining the elements* which secured the advantages of these combinations, was the location of the hoisting device and its frame *broad side* to the wall and the provision of *substantial connections* between the lower ends of the vertical side pieces of his hoisting frames upon which the ends of the cross pieces could rest *without fastenings*. *This was the principle of his new combinations* of hoisting devices and their frames with the cross pieces and floor pieces of the scaffolds.”

There is at least one person who appreciated the advantages of the loose jointed or flexible connection between the cross pieces that support the platform of a builders’ scaffold, and the hoisting devices connected with the scaffold, and that person is Egbert Whitney, one of the respondents herein.

On pages 394-400 of the record is shown and illustrated Letters Patent to Whitney, No. 998,270, dated July 18, 1911; and on pages 216-236 is printed the contents of the file wrapper of Whitney's application when it was in the Patent Office; and as originally presented, his application contained a claim covering the very construction of the Henderson patent in suit, said claim reading as follows (page 226):

"22. A scaffold including corner frames, supporting rods disposed in the lower ends of the corner frames (U-shaped frames), beams engaging across the supporting rods at the ends of the scaffold, longitudinal beams engaging over the said end beams, supporting cables depending through the frames, and controlling mechanism carried by the frames for engagement with the cables to regulate the vertical adjustment of the scaffold."

In the first action of the Examiner dated March 7, 1911, page 227, the Examiner cited several patents, and among others, the patent in suit "Henderson 959,008, May 24, 1910" and respecting Claim 22 the Examiner stated (page 228): "Claim 22 does not seem to present invention over Henderson or others." *The respondent Whitney made no effort to claim that the structure specified in Claim 22 was in any substantial respect different from the structure shown in the Henderson patent, and made no effort to claim priority over Henderson; but meekly cancelled Claim 22, together with a number of others (page 229).*

It would seem as if the respondent Whitney cannot with very good grace now deny the advantages of the structure of the Henderson Patent in suit, after having made claim for a patent *on the very same thing*, and de-

claring that his application was for certain new and "useful" improvements in scaffold (page 216).

And a most cursory glance at respondent Whitney's patent (Rec. 394; Fig. 1) shows the combination of the putlogs or crossbeams, platform planks extending between such crossbeams and a hoisting device consisting of a U-shaped metal bar extending around the under side of and upward from the crossbeams, and a hoisting drum supported by the sidemembers of the bars. The structure shown in Figure 1 of the respondent Whitney's patent has the *loose jointed* or hinge connection between the putlogs 69 and frames 14, and has the frames arranged *broadside* to the wall of the building. The structure there shown has all the advantages of the structure of the patent in suit, and, in fact, contains its principle of operation in all respects. That respondent Whitney contented himself with the issuance to him of his patent on details of a clutch mechanism is, of course, immaterial. The Patent Office did not grant him the right to infringe upon the prior Henderson patent, but only to use his patented details in a manner not in infringement thereof.

### ***Patentable Novelty.***

The respondent Chain Belt Company in its answer to petitioner's complaint, as we have already seen, denies patentable novelty, alleges prior use and anticipation, and sets up a number of prior patents. The respondent Egbert Whitney filed no answer to the original bill of complaint, and set up no defense to the validity of the patent in suit; but after the trial the respondents amended their joint and several answers, by setting up an alleged use by the petitioner at Chicago, Illinois, prior to the date of the Henderson invention (pp. 57-58).

Of the prior patents offered in evidence, four relate merely to painter scaffolds and hoist chairs for painters' use; namely, Bowyer, *et al.*, Sladek, Harpin, and Crandall. These devices consist of a single narrow supporting plank upon which the workmen must sit or stand while at work, blocked at each end by the hoisting mechanism, in contrast to a wide and continuous platform, such as shown in the patent in suit, extending along the entire length of the building, on which masons can deposit the brick and mortar used by them with the aid of wheelbarrows, and convey them from one end to the other of the gangway platform.

While these patents show hoisting devices, they were not troubled with difficulties inseparably connected with mason's platforms, because there is *only one* hoisting device at each end of the single narrow plank, used largely in low structures, as small houses for painting or the like. The Crandall patent hoist chair (record, p. 380) does not even have a plank, but is intended only as a single seat for the workman.

In the patent in suit there must be *at least four* hoisting machines used, *one at each corner* of a comparatively wide scaffold, and when the outside of the scaffold is raised higher than the inside or vice versa, the cable is liable to bind on the drum and against the cheek of the drum, as stated by the witness Cavanagh (record, p. 67, Q82-101). It is mainly in respect to the conditions that arise when the scaffold of the Henderson type is adjusted in a line transversely of the length of the platform, that the *loose or hinged joint connection* between the hoisting machine and the platform comes into use, and such conditions cannot arise in devices of the single plank construction and single hoist chair shown in the painters' scaffolds. There is, therefore,

nothing in those prior patents that suggests the desirability of such a hinge connection between the platform and the hoisting apparatus, nor is there anything in such devices that suggest the advantages of having the drum of the hoisting machine broadside with the wall of the building being constructed. There is nothing in such devices that suggest a masons' scaffold of a simple and efficient construction that may be readily assembled or taken apart and transplanted or stored and shipped. Inasmuch as those painters' scaffolds were not designed to be used for the purpose, nor adapted, nor actually used for the same purpose as the device for the Henderson patent, and do not suggest in any way the Henderson idea, they cannot be regarded as disclosing or suggesting the Henderson structure. Nor can it be contended that these devices might be modified so as to accomplish the result of the device of the Henderson patent, since "It is not sufficient to constitute an anticipation, that the device relied upon might by modification be made to accomplish the function performed by the patent in question, *if it were not designed by its maker nor adapted or actually used for the performance of such function*" (Topliff v. Topliff, 145 U. S., 156-161, p. 108).

Not only must the device of the patent in suit be found in a prior patent, to constitute anticipation of invention, or to establish want of patentable novelty, but it must be found there in its operative entirety, for, as stated by this Court, in *Paper Bag* case, 210 U. S., 405, 408: "The principle of the invention is a unit." And: "The combination is a composition of elements, some of which may be old and others new, or all old or all new. It is, however, *the combination which is the invention*, and it is as much a unit in contemplation of law

as a single or non-composite instrument' ” (Leeds & Catlin v. Victor Co., 213 U. S., 325, p. 332).

Specifically considered, the means for connecting the hoisting device of the Bowyer *et al.* Patent, page 332, consists of a frame which (p. 1, l. 4) :

“Consists of the side bars D-D, which converge at their upper ends and are connected to a disk E, and the horizontal supporting bar F, which is provided on its upper side with spurs f, adapted to engage in the plank.”

The plank B is also held in place by an arm W (p. 2, l. 15), which passes over the end of the plank close to the upper surface thereof, and therefore prevents the same from being lifted from the spurs S, and thus from becoming detached from the supports. This *rigidity* is an altogether different idea from the *flexible or loose-jointed* connection of the Henderson Patent.

The Sladek Patent (record, p. 336) shows and describes a framework supporting a scaffold. “The side bars of the frame rest in stirrups B secured to or made integral with the suspension from C and C.” The frame H<sup>1</sup>, A, C<sup>1</sup> and C<sup>1</sup>, constitutes a *rigid* structure. There is no idea there of a *loose-jointed or flexible connection* between the hoisting machine frame and the platform.

The construction of the platform or stage 1 of the Harpin Patent (record, p. 356), and its connection with its support is very indefinite. It seems to be clamped by “A jaw 24” (l. 95), “and clips 29” (p. 2, l. 21), to prevent its movement; but nowhere is there any suggestion of a *loose-jointed or hinged connection* between the supporting frame and the platform.

Not alone are those hoist chairs and painters' stages constructed on principles altogether different from those that underlie the patent in suit, but they are, *per se*,

entirely foreign to the invention of the patent in suit.

Of the other patents cited, the patent of Clark (record, p. 340), and the patent of Foster (record, p. 346), show no hoisting mechanism, and therefore cannot possibly disclose the device of the patent in issue. The patent, to Howe (record, p. 370) shows a fire escape provided with a cable, in which "the end of the cable 19 is fastened to the building and the rope 21 passes around the body of the person to be lowered." It is difficult to see any connection whatever between that patent and the Henderson construction. There is certainly no suggestion of any kind in the patent of a platform or scaffold and a *loose-jointed or stirrup* connection between the platform and the hoisting device frames.

Of the remaining patents, Cavanagh No. 796807 (record, p. 374) shows a platform or scaffold connected by hooks to supporting ropes f and g, and Murray, 888,206 (record, p. 390), shows a platform supported by cables passing around sheaves and connected with turnbuckles c, 8, page 1 of patent, lines 40 to 52. Those two patents cover structures spoken of in the testimony as "overhead" machines, since the outriggers have the machines secured thereto. In such cases it is necessary for the men to leave the platform to look after the mechanism of the machines, and the machines being above and out of reach and sight of the workmen, create a feeling of insecurity. A dangling rope for operating the machines causes further disadvantage in the use of "overhead" types of platforms, since it was usually in the way, was blown by the wind against the workmen, and at the best provided an insecure and unsatisfactory manner of operating the hoisting machines.

The Murray Patent No. 854,959 (record, p. 386) shows the only approach to a masons' platform operated by

hoisting devices on the platform, and comprises a put-log *secured rigidly and fixedly* to the free ends of frames d. The reference in the patent to that feature is contained in the following brief statement (p. 1, l. 54):

“In the position of the scaffolds shown, the outriggers b have each two rods suspended therefrom, such rods c being each secured preferably detachably to a frame d composed preferably of angle iron, said frames being arranged in pairs and *each pair being secured to a horizontal bar e*, the said beam serving as supports for the usual planking f composing the floor of the scaffold.”

The specification does not describe, nor is there any evidence in the patent that Murray ever had in mind any other means for securing the frames to the scaffold. The drawings show that they are rigidly *riveted* thereto. Murray's entire invention consisted in providing means for replacing the outriggers without interfering with the workmen on the scaffold, and to that end, he provided an ordinary scaffold and ordinary hoisting devices, with auxiliary bars c on the frames that are fastened to one set of outriggers to support the platform, while a new set of outriggers is being adjusted in place (page 1 of the patent, line 84):

“In the use of *my invention*, a set of outriggers b is placed in position and the hooks h<sup>5</sup> of the cables h<sup>4</sup> are hung thereon and when the crank-arms m<sup>2</sup> are operated the cables are wound on the corresponding drums until the frames d are clear of the ground after which the planking f is placed in position and the scaffold is ready for use, and, as the work progresses, the scaffold is raised by degrees until the cables are almost entirely wound on the drums and the scaffold is in close proximity to the outriggers b. Before this position has been reached by the scaffold, however, workmen other than those

upon the scaffold have arranged the set  $b^2$  of the outriggers at a greater height after which the rods  $c$  are hooked to the outriggers  $b$ , the cables unwound from the drums and the hooks thereof hung from the outriggers  $b^2$  and when the crank-arms are again operated the scaffold is supported from the outriggers  $b^2$  after which the outriggers  $b$  are removed and secured at a still greater height than the outriggers  $b^2$  and ready for another shift."

Inasmuch as Murray never had his mind directed to the same object or purpose that Henderson had in mind, he naturally did not attempt to solve the same problem. Whatever similarity there may be between the device of that patent and the Henderson Patent, is purely accidental and was not recognized or appreciated by Murray. The Murray patent, therefore, cannot be regarded as a disclosure or anticipation of the device of the Henderson patent in suit (*Tilghman v. Proctor*, 102 U. S., 707-711).

Those engaged in the art of making scaffolds certainly never derived the least hint from the device of the Murray Patent in so far as the invention in suit is concerned. On the contrary, Murray taught the trade by means of his patent, to make a one-piece *rigid and cumbersome structure* consisting of a post and two frames *rigidly fixed* thereto. Such a structure, as the witness Cavanagh has testified, is impracticable, because both hoisting devices must be operated simultaneously, and if only one is operated the entire weight is thrown on the other, and also on the insecure fastening, which may then readily shear off.

It is suggested by respondent that if the frame of the Murray Patent be reversed upside down, you will have the Henderson structure, but that is not so. There would still remain the association or combination of the

end of the cross bar engaging the stirrup end of the frame, and it would still be necessary to *reconstruct the open end* of the frame. But assuming that Henderson's combination of elements could be unscrambled and traced back to separate elements, and assuming that several of the elements of the Murray Patent might be reconstructed, and then re-arranged, where would one get such a suggestion for so doing, or how it might be done? Could he get it from the Murray Patent? Certainly not. He would get it, if at all, from nowhere else than the Henderson Patent. But such methods of dissecting the device of a patent and comparing its disjointed parts with the devices of the prior art cannot invalidate a patent. It is easy enough to change the Murray construction into the Henderson construction, with the aid of the Henderson Patent before one, but that does not constitute anticipation.

The Murray Patent certainly does not show the prior completed invention of Henderson, and the prior art must be taken *as it is*, not as modified by the resourceful mind of the infringer.

Attention is called to the fact that while the Henderson application was in the Patent Office, the device of that patent was compared with the devices of the prior patents offered in evidence, and the Henderson Patent was allowed by the Examiner after full consideration, as possessing patentable novelty over the patents now set up by the respondents (p. 192), and over the Murray platform patent, so that the presumption of validity is strengthened (*Hale & Kilburn v. Oneonta Co.*, 127 Fed., 598, 600).

"The burden of proving anticipation by clear and convincing evidence rests heavily upon the defendants" (*American Graphophone Company v. Leeds and Catlin*,

170 Fed., 327, 330) and "The law requires not conjecture but certainty" (Coffin v. Ogden, 18 Wall., 120, 124; 21 L. Ed., 821).

It is obvious that neither the Murray nor any other of the patents produced from the prior art disclose any "clear and convincing evidence" of prior knowledge of the invention patented by Henderson.

Failing to show anticipation, the respondents suggest that it required only a slight change from the prior art to produce the device of the patent in suit, and therefore the patent is invalid.

Invention is measured by the new results produced. If a new result is produced, and it is a useful result, it does not matter how radical a change has been made over the devices of the prior art. It may be only a step, but if it is the "last step," *it wins*.

In Potts & Company v. Creager, 155 U. S., 597-608, this Court said:

" 'The apparent simplicity of a new device often leads an inexperienced person to think that it would have occurred to any one familiar with the subject. But the decisive answer is that with dozens and perhaps hundreds of others laboring in the same field, it had never occurred to any one before. *The practiced eye of an ordinary mechanic may be safely trusted to see what ought to be apparent to every one.*' "

In Expanded Metal Co. v. Bradford, 214 U. S., 366, this Court said (p. 381):

"It may be safely said that if those skilled in the mechanical art are working in a given field and have failed after repeated efforts to discover a certain new and useful improvement, that he who first makes the discovery has done more than make the obvious improvement which would suggest itself

to a mechanic skilled in the art, and is entitled to protection as an inventor. \* \* \* *It is perfectly well settled that a new combination of elements, old in themselves, but which produces a new and useful result entitles the inventor to the protection of a patent.* Loom Company v. Higgins, 105 U. S., 580-591."

In Topliff v. Topliff, 145 U. S., 156-161, this Court applied that rule in referring to a prior device, as follows:

" 'Their device evidently approached *very near* the idea of an equalizer, but this *idea did not apparently dawn upon them*, nor was there anything in the patent which would have suggested it to a mechanic of ordinary intelligence unless he was examining it for that purpose.' "

And in the Barbed Wire Patent, 143 U. S., at page 283, it is said:

" 'In the law of patents, *it is the last step that wins.*' "

Petitioner at one time tried to use the *rigid* connection between putlogs and frames shown in the Murray patent. As stated by the witness Davidson (record, p. 160, Q284):

"And the Murray machines used by you at that time, prior to 1909? A. We was using the machine of the *rigid* type, like that patent."

Again (record, p. 158):

"A. Our machines did not operate as we hoped they would.

Q270. Which ones do you mean now? A. I mean *the Murray*.

Q271. Overhead? A. Murray overhead we did

some business with. The Murray *riveted rigid* machine it was very hard to put on the market.

Q272. I don't just get what you mean. What do you mean by the Murray riveted machine? A. That is the Murray patents of 1907 machine which we took over and which we expected was going to be a better machine than—would compete with the overhead, but in that we were disappointed, because it *was practically junk*, and, of course, we were experimenting, and our people in the shop were working continually on these machines and operating what would operate."

Again (record, p. 159):

"Q280. What machine bothered you—gave you that trouble? A. Why we had a *rigid* frame—originally we have an overhead—and they both gave us that trouble."

So much for the Murray patent in actual use.

The respondent's effort to magnify the merits of the Murray Patent remind one of the language of this Court in *Diamond Rubber Company v. Consolidated Company*, 220 U. S., 440:

" 'The prior art was open to the Rubber Co. That art was crowded,' it says, 'with numerous prototypes and predecessors of the Grant tire, and they, it is insisted, possessed all of the qualities which the dreams of experts attributed to the Grant tire. And yet the Rubber Company uses the Grant tire. It gives the tribute of its praise to the prior art; it gives the Grant tire the tribute of its imitation as others have done.' "

So in this case the respondents give the tribute of their praise to the device of the Murray Patent and to the device of the Henderson Patent, the tribute of their imitation.

After scrapping that feature of the Murray patent as "practically junk" petitioner adopted the loose-jointed or stirrup connection of the Henderson patent between the hoisting machine frame and the cross beams or putlogs. And what was the result?

The witness French, who has been in the scaffolding business, handling contractors' equipment for about 15 years (p. 83, XQ117), testifies (p. 79, Q85) as follows:

"To what extent did these devices of Henderson supplant these types you have spoken of?

"A. It is rare you ever saw a strap-hanger used in the last three or four years. Most all jobs that are scaffolded with the exterior scaffolds are equipped with the *Henderson type of machine.*"

Again, the same witness testified (p. 82):

"Q112. What can you say about the use of these U-shaped frames like this one which is Plaintiff's Exhibit No. 15, during the last two or three years, in the construction of high buildings?

"A. The U-shaped frame machine *with the loose connection* enables the operator to raise the scaffold machines *one at a time*, allowing the putlogs to tip or hinge over the support of the U-frame, leaving the machine *standing erect at all times.*

"Q113. What can you say as to the extent of the use of devices of the kind you have just described?

"A. *They are used practically on all large buildings.*"

No attempt has been made to deny that testimony. The devices that this witness states are used in all large buildings are referred to by him on page 90, as follows:

"XQ213. Just what is there in the scaffold de-

vices that you are selling and have been selling for the Patent Scaffolding Company for a number of years, that differ in advantage or result from what you have examined there in the Murray Patent?

"A. Are you referring to this patent right here?

"XQ214. I am referring to the entire Murray Patent you have in your hands, and ask you to state how, if at all—what advantages if any exist in the structure you have been putting up over what is shown there.

"A. In the machines that we are putting up now, the putlog is narrower and enables the machines to be *raised to uneven heights without opening the planks where they are lapped.*

"XQ215. Was that all?

"A. The machines as we furnish them now, the putlogs are *not fastened rigidly* to the frame of the machines.

"XQ216. They are held by bolt now?

"A. The bolts go through the putlog and through the U-frames and *rest on the frame*, but the bolts are *left loose* so that the putlog *can hinge*, as it were, *on the frame.*

"XQ217. Is that all?

"A. Having the putlog hinged, as it were, on the frame of the machine, allows the cable to wind *evenly on the drum, the machine being vertical at all times.*"

The novelty and utility of the Henderson combination moreover is strongly attested by the way it found a place for itself in the trade, and the manner in which it has been adopted by practical builders. The witness Cavanagh testified that these U-shaped frames, *with hinged connections*, are used on "very near all of the buildings being put up throughout New York State, so far as I know"; and in "very near all places up through Connecticut and buildings going up in Philadelphia, *won't use anything else but our machine*" (record, p. 71,

RDQ120, 123), and no attempt has been made to deny that testimony.

The respondents have suggested that prior to the date of the Henderson patent, scaffold hoisting machines had been used on the Blackstone Hotel at Chicago, having supporting frames substantially similar to the construction shown in the Henderson patent, but that structure was the same as the Murray patent in respect to the frames being *rigid* with the putlogs. Furthermore, that testimony was in relation to events that happened many years prior to the time that the testimony is given and does not come within the requirements stated by this Court in *Deering v. Winona Harvester*, 145 U. S., 286, in which this Court stated that such evidence must be "so cogent as to leave no reasonable doubt in the mind of the Court that the transaction occurred substantially as stated." (And to the same effect, *The Barbed Wire Patent Case*, 143 U. S., 275, 285.)

But considering that testimony in its most favorable light, it shows conclusively that the hoisting device used on the Chicago scaffolds were "practically junk." Thus the witness La Belle stated (record, p. 174):

"XQ129. Those first machines you testified about, at the Hotel Blackstone and Hotel LaSalle were made as tight as possible between the putlogs and frames, were not they as you testified on your direct examination? What do you mean by tight? A. We had to tighten them. We *had to tighten the putlog on the bottom of the U-frame.*

XQ130. So that the putlogs and frames were *rigidly connected* with each other? A. Yes, sir.

XQ131. No doubt of that in your mind? A. No."

And the putlogs were *fastened* to the frames (record, p. 174, XQ132), and the frames *could not elevate or*

*swing from one bolt to the other* (record, p. 174, XQ133).

The difference between the Henderson device and the supporting device of the Murray patent and of the Chicago construction was the difference between "practically junk" and a successful operative device which the witness Cavanagh states is used to the exclusion of all other machines.

### ***Infringement.***

The petitioner respectfully contends that Claims 1 and 3 of the Henderson Patent in suit have been infringed by the defendants in making and selling scaffolding devices, known as the "Whitney Scaffold Hoist" machine, and the "Little Wonder" machine, respectively. The defendants in placing those machines on the market did not sell the wooden platforms or cross-bars, but the machines were sold with the knowledge and understanding that they are to be used with the platforms or cross-bars, elements of the claims of the patent in suit, and they are, therefore, guilty of contributory infringement. "One who makes and sells articles which are only adapted to be used in a patented combination will be presumed to intend the natural consequences of his acts, he will be presumed to intend that they shall be used in the combination of the patent. It is the duty of one who is offering for sale one or more articles which he intends shall be used in combinations which, if unlicensed, will infringe a patent to see to it that such combination which he thus promotes and induces are lawfully organized" (Thomson-Houston Electric Co. v. Ohio Brass Co., 80 Fed., 712, 821, 26 C. C. A., 107, 116).

The infringement as alleged in the complaint against the respondent Chain Belt Company (record, p. 4, par. 5)

is denied by that respondent, in its individual answer (record, p. 18, par. 9).

After the respondent Whitney was permitted to intervene, a supplemental and additional bill of complaint was filed wherein the petitioner charged infringement against said defendants as follows (record, p. 50):

“On information and belief, that the defendant herein, the Chain Belt Company, manufactured for the said Egbert Whitney the machines held to be an infringement of the said Henderson patent No. 959,008 by the said Hon. Circuit Court of Appeals of the Eighth Circuit, as before mentioned, these machines being known as ‘Whitney Scaffold Hoist Machines,’ and that the said defendant, Chain Belt Company, has also manufactured for the said Egbert Whitney, the intervenor herein, other scaffold hoisting machines known in the trade as ‘Little Wonder’ machines. These machines, on information and belief, were manufactured by the defendant herein for the said Egbert Whitney before the filing of the original bill of complaint herein, and after January 1st, 1912.”

In the joint answer to the supplemental bill of complaint, the respondents admitted that the respondent Chain Belt Company manufactured for respondent Egbert Whitney, “Whitney Scaffold Hoist” machines, and also admitted that the Chain Belt Company has manufactured for the said Egbert Whitney, scaffolding devices known as the “Little Wonder” (record, p. 55, par. 3). The defendants further admitted that the respondent Egbert Whitney agreed to defend and indemnify the Chain Belt Company against loss which might be suffered because of infringement suits (record, p. 56, par. 5).

In answer to revised interrogatories filed by the petitioner, the Chain Belt Company admitted that prior to

the bringing of this suit, the said company made scaffold machines for Egbert Whitney, doing business under the name and style of The Eclipse Scaffolding Company of Omaha, Nebraska, which were known as "Whitney Scaffold Hoist" machines. The respondent Chain Belt Company also admitted that it began making "Little Wonder" machines for said Egbert Whitney, April 3, 1914 (record, p. 54).

On the trial of the cause, the defendants jointly admitted on the record (p. 95) that they, prior to the fall of 1913, manufactured "Whitney Scaffold Hoist" machines on the order of the respondent Whitney, and that since April 3, 1914, said defendant manufactured "Little Wonder" machines upon order of the respondent Whitney:

"It is admitted on behalf of the defendants that upon order of Egbert Whitney and from specifications prepared and submitted by him defendant made 'Little Wonder' machines shown in evidence by Plaintiff's Exhibit 16, and has done so since 1914, and commencing April 3rd, 1914; and that in the same way it made, prior to the fall of 1913, the 'Whitney Scaffold Hoist' machines, which it delivered to customers on the order of Mr. Egbert Whitney."

Copy of Letters Patent to Whitney, 998,270, were offered in evidence (record, p. 396) by petitioner and marked Plaintiff's Exhibit No. 4, being the patent referred to in the opinion of the Court of Appeals of the 8th Circuit, attached to the original bill of complaint.

The witness French's attention was called (record, p. 76, Q51 to that patent, and exhibits, and testified as follows:

"51Q. I show you plaintiff's exhibit No. 4 and ask you how nearly like the description that you

made about the Whitney Scaffold Hoisting Machine is the picture on Figure 1? How nearly like this device in this patent 998,270 was the Whitney Scaffold Hoist device about which you have been testifying?

"A. As nearly as I can tell from the picture, from the drawing, the picture, *it is the same.*

"52Q. And in answering that question you also looked at figures 2, 3, 4, 5 and 6 found on sheet 2 of that same patent?

"A. Yes, sir.

"53Q. I show you a photograph and ask you how nearly like the machines that you identify as Whitney's Scaffold Hoist machine, the machines were that are shown in that photograph?

"A. Practically *the same machine.*

"54Q. Please state briefly how these machines, or machines like those shown in this photograph, worked, and how they were arranged. The photograph shows a pair with the putlog passing through. How were others like that arranged? State briefly.

"A. *Arranged in the same way, with the putlog passing through the frame of the machine* which were hung broadside to the building.

"55Q. In other words, first an outrigger, and sets of outriggers at the upper part of the building, from which cables are suspended, and these cables *pass through these frames?* Is that right?

"A. Yes, sir.

"56Q. And these frames arranged *broadside* to the wall of the building as you have testified?

"A. Yes, sir.

"57Q. And the putlogs *pass through the frames,* and they are arranged at right angles to the wall of the building?

"A. Yes, sir.

"58Q. And what is arranged on the different putlogs of the different pairs of machines?

"A. The plank that forms the platform.

"59Q. State how these machines are operated when you want to raise or lower the platform.

"A. They are pumped the same as a well pump."

The photograph referred to by the witness was offered in evidence as Plaintiff's Exhibit 17 (record, p. 77, after Q66).

The witness testified that he had seen machines known as the "Whitney Scaffold Hoist" machines on several jobs in Chicago in 1911. The witness states that they were arranged *broadside* of the building, and were installed with outriggers projecting over the building or out from the floor levels suspended on cables, having a wooden putlog slipped through the U-frame which supported the platform of scaffold planks from which the men work. He further makes the statement that the connection between the U-shaped frames and the putlogs was "*loosely made*" (p. 75, Q35-41).

The loose-jointed or hinge connection between the U-shaped frames, and the putlogs, is perhaps the most distinctive feature of the Henderson patent in suit. The construction and mode of operation of the "Whitney Scaffold Hoist" machine is further referred to by the same witness (record, p. 77, Q64, 66), and a photograph referred to by the witness of the "Whitney Scaffold Hoist" machine, was offered in evidence, marked Plaintiff's Exhibit 17.

Another photograph was also offered, Plaintiff's Exhibit 19 (record, p. 80), after the witness had testified that the photograph represented the "Whitney Scaffold Hoist" machine, which he had seen in use in 1911 (record, p. 80-81, Q89-93).

That the "Whitney Scaffold Hoist" machine is substantially the same as that of the patent in suit in respect of the elements referred to in Claims 1 and 3, was admitted by the respondent Whitney himself, when he filed his application for Letters Patent 998,270, printed on pages 396-400 of the record. The specification and

claims as originally presented by him, is also printed in the record (pp. 215-226), and original Claim 22 (p. 226) read as follows:

"A scaffold including corner frames, supporting rods disposed in the lower ends of the corner frames, beams engaging across the supporting rods at the ends of the scaffold, longitudinal beams engaging over the said end beams, supporting cables depending through the frames, and controlling mechanism carried by the frames for engagement with the cables to regulate the vertical adjustment of the scaffold."

Analyzing the elements of the Whitney device, as specified in that claim, and comparing them with those of the Henderson Patent, we have:

(1) A scaffold (that is described in the Whitney Patent, record, p. 397, ll. 78-85).

(2) "Corner frames" are the frames of the hoisting mechanism referred to in the patent in suit (p. 1, l. 61), and in the Whitney Patent (record, p. 397, l. 91):

"The supporting frames are of like structure each one of which comprises a pair of companion bars 13 and 14,"

and are of the same general construction and perform the same function of supporting the platform and the hoisting mechanism as the frames of the patent in suit.

(3) "Supporting rods disposed in the lower ends of the corner frames."

Those elements are referred to in the Whitney Patent (record, p. 397, l. 110) as rods 20:

"A supporting rod 20 is fitted at its ends in the loop 17, and is *headed at its extremities* to engage

against the outer edges of the loop 17 *to hold the rod 20 from longitudinal displacement.*"

That is, in effect, to connect the rod 20, as *firmly* and *completely* with the upright bars of the frame, as if that rod was *integral* with the upright bars. In the patent in suit that element comprises the lower or stirrup end of the frame passing around and supporting the cross bar.

(4) "Beams engaging across the supporting rods at the ends of the scaffold."

Those are referred to in the Whitney patent (record, p. 399, l. 24):

"End beams 69, of considerable thickness are positioned *across the supporting rods 20 of each pair of frames.*"

The same elements are referred to in the patent in suit (p. 1, l. 64) as cross-bars 7, to support the platform. The end beams 69 of the Whitney Patent and the cross-bars 7, are the same as "putlogs" which is the name used by the witnesses. ("Putlog" is a word carried into the suspended scaffold art from the earlier art, and is a log put out of the building to put planks on to form a scaffold.)

(5) "Longitudinal beams engaging over said end beams."

Those are referred to in the Whitney Patent (record, p. 399, l. 27, as follows):

"The floor or body of the scaffold comprises a number of longitudinal beams 70 arranged longitudinally *across the end beams 69* upon which they are supported."

In the patent in suit, those beams are referred to collectively as the platform (p. 1, l. 65).

(6) "Supporting cables depending through the frames," are referred to in the Whitney Patent at record, page 397, lines 85, 100, and designated by the numeral 12, and they are referred to in the patent in suit by the numeral 3 (p. 1, l. 55):

"As shown in Fig. 1, the framework 1 of the building supports at its upper portion a plurality of outriggers 2 from the overhanging portions of which cables 3 depend. *Each of these cables 3 is connected at its lower end to a hoisting mechanism 4, which together serve to support the cables.*"

The cables are manifestly the same in each construction.

(7) "*and controlling mechanism carried by the frames for engaging with the cables to regulate the vertical adjustment of the scaffold.*"

That is the hoisting drum and gearing of the Whitney Patent and the hoisting drum and gearing of the patent in suit, *identically the same functioning elements* in each case.

It is obvious on a comparison of the proposed claim in the Whitney application, and the device of the patent in suit, that if the Whitney patent had been allowed with that claim, the claim would have been infringed by the construction of a device of the Henderson Patent in suit, and if respondent Whitney had obtained such a claim, he would undoubtedly have promptly brought suit against the user of the Henderson machine, and would have earnestly represented to the Court that the Henderson device and the Whitney device were the same. Whitney's confession that the elements specified in Claims 1 and 3

of the patent in suit are substantially the same as the corresponding elements of the Whitney patent, as specified in that proposed claim, is manifest from the fact that when that claim was rejected, on reference to the Henderson patent (record, p. 228) ("Claim 22 does not seem to present invention over Henderson or others"), Whitney acquiesced therein, without making any attempt to distinguish the construction referred to in that proposed claim from that shown in the Henderson Patent, and cancelled the claim.

The good old proposition of equity would seem to apply here: "He who does not speak when he should speak, shall not be heard to speak when he would speak"; and inasmuch as Whitney could not point out any material difference between his structure and the structure of the patent in suit, when he had an opportunity of doing so in the Patent Office, we respectfully suggest that this Court should not be over-keen in making such a distinction for him in this case. It almost seems trifling with the Court for the respondent to argue that there is any difference between the "Whitney Hoist Scaffold" machine and that shown in the Henderson Patent in respect of the elements stated in Claims 1 and 3 of the patent.

Infringement is substantially acknowledged by the respondent Whitney by his action in discontinuing the use of the infringing "Whitney Scaffold Hoist" device. It is alleged by the respondent Chain Belt Company (record, p. 54):

"The manufacture of Whitney's Scaffold Hoist machine was discontinued November 11, 1913."

And in their answer to the "supplemental and addi-

tional bill of complaint," the respondents allege (record, p. 55):

"3. Defendants admit that the Chain Belt Manufacturing Company manufactured for the said Egbert Whitney for a time Whitney Scaffold Hoist Machines, but defendants state that this manufacture was discontinued prior to the filing of the original bill of complaint herein,"

but that does not excuse the respondents or relieve them from their liability for prior infringement.

Of course the fact that these infringing devices were made under a patent subsequent in date to that of the patent in suit, does not relieve the respondents from the same liability. (Cantrell v. Wallick, 117 U. S., 689; Hobbs v. Beach, 180 U. S., 383; Stockland v. Russell Grader Co., 222 Fed., 906, 910.)

It will be remembered that the respondent's "Whitney Scaffold Hoist" machine has a U-shaped frame for supporting the putlogs by placing them into the U-shaped frame, and that the frame had a drum and a clutch, which drum and clutch operated together to grip the cable. Hoping to evade the Henderson claims, respondent Whitney then substitutes for his drum, a second clutch, but retains otherwise all the essential elements of his first device. He retains the U-shaped frame for the placing of the putlog therein, and retains the hoisting devices on the frames. And to hide his wrongdoing gives this modified structure a different name, to wit: "Little Wonder." The lower part of the "Little Wonder" machine clearly has a U-shaped portion for the express purpose and effect of supporting the putlogs in *loose-jointed connection* therein.

It is only by the *hinged* use of the "Little Wonder" machine and its *loose-jointed connection* with putlogs,

that on the tilting of the putlog, the hoisting device *can follow the cable*, and be *straight* therewith. The moment the frames are rigidly *locked*, the tilting of the putlog and the consequent tilting of the frames, brings about an inclined relation between the hoisting device and cable, and by reason of the weight of the scaffold, the jaws of the hoisting device become opened and the cable is released, whereupon the scaffold drops.

Respondents admit the making of the "Little Wonder" machine (page 95 of the record):

"It is admitted on behalf of the defendants that upon order of Egbert Whitney and from specifications prepared and submitted by him, defendant made "Little Wonder" machines, shown in evidence by Plaintiff's Exhibit 16, and has done so since 1914, and commencing April 3, 1914."

A specimen of the "Little Wonder" machine was offered in evidence as Plaintiff's Exhibit 16, page 75, at Q43; and the general construction and arrangement of the parts of such machine is described by the witness French (p. 73, Q16-74-35).

Before referring to the witness's analysis of the "Little Wonder" machine, we would call the Court's attention to the copy of the patent on that machine offered in evidence (record, pp. 402-404), which gives the respondent Whitney's idea of that construction as he embodied it in his patent. The first proposition that impresses one is the fact that in his patent, Whitney simply shows a hoisting element. He does not show a scaffold, cables supporting the scaffold, and outriggers supporting the cables, and scaffold or platform; but he states, on page 1 of the patent, line 10:

"My invention relates to that class of hoisting machines which are *only used in pairs suspended by*

*cables at the side of a building in process of construction, for the purpose of raising, lowering or supporting a platform for the accommodation of bricklayers and other workmen. A typical machine of this class is the subject of Letters Patent of United States No. 998,270, which was issued to me, July 18th, 1911, for improvements in scaffolds."*

The important fact established by that statement of the Letters Patent is that the hoisting element, although shown in his second patent without any of the other elements specified in the claims of the patent in suit, must, in fact, be used with those elements to be of any practical use whatever.

The next point that impresses one on reading the patent for this "Little Wonder" hoisting element, is, that it contains a frame equivalent to a U-shaped frame for the same purposes as that of the patent in suit. This frame is referred to in Claim 1 of the patent, line 5:

"and a suspended frame upheld by clutches alternately and provided with means for holding both clutches in vertical alignment."

Said frame is composed of the vertical side rods 10, referred to on page 1 of the specifications, line 82:

"The transverse and removable cross plate 23 which is perforated to accommodate the cable 8 connects the side bars at the bottom."

And:

"Intended to support the platform" (record, p. 404, ll. 4, 8).

That frame supports the hoisting mechanism proper in the same general way that the U-shaped frame of the patent in suit supports the hoisting mechanism. The

"Little Wonder" hoisting mechanism as shown in the second Whitney Patent, 1,114,832, comprises two aligning clutches mounted respectively in clutch boxes 1 and 2 (record, p. 403, l. 66).

Thus, he retains the upper clutch of his former patent, and substitutes for the clutch acting drum there shown, a second clutch in adjustment with the upper clutch but still places both on the frame which has the U-shaped bottom. At all times, the "Little Wonder" clutch maintains its grip or clutch on the cable, so at all times does the Henderson drum maintain its grip or clutch. Thus the principle and the result is the same.

Turning to the second patent of Whitney it says:

"Each of these boxes has a vertical peripheral split tubular wall, formed in duplicate wall sections 3 and 4, marginally contacting with each other, a cap 5 fitted over the top of the wall, and an inverted cap 6 fitted to the bottom of the same. These caps hold the contacting wall sections rigidly together, and having each a hole 7 through the middle for the accommodation of the steel wire cable 8, which is suspended from above. By these caps and their terminal perforations 9, the upper clutch box has a rigid engagement, and the lower clutch box a sliding engagement, with the vertical side rods 10, occupying those perforations. The lower clutch box is movable *vertically a short distance toward and from the upper clutch box* on and between these rods by the split hand lever 11, *which works like a pump handle*, on a pivot 12 projecting from that box, and is connected by the link 13 with the stop bracket 14 fixed on one of these rods."

The operation of the device is described in the patent (record, p. 404, l. 19):

"To raise the load, a workman first lifts the free end of the lever, thereby releasing and raising the

lower clutch box, and then forces down the lever, thereby bringing the lower clutch into action and releasing and lifting the upper clutch from which the load is suspended. By thus raising and lowering the lever repetitiously, like a pump handle, *he causes the machine to climb the cable with an inch worm movement*, so to speak, and raises the platform to any desired level step by step. To lower the load, both clutches gripping as above described, the operator first releases the upper clutch with the key 24, then lets down the upper clutch box and the dependent load by raising the lever, then with the same key, transferred to the lower clutch box, while the *upper clutch automatically grips the cable*, he releases the lower clutch and then lowers the lower clutch box in the same manner, thereby placing the machine in posture for raising or lowering again in the same manner."

We have, therefore, not only a frame engaging the cables, but we have the lower end of the frame of U- shape to support the cross beams or putlogs, although not shown or described in the patent, but the fact is plainly stated (record, p. 404):

"The transverse and removable cross plate 23, which is perforated to accommodate the cable 8 connects the side rods at the bottom and is *intended to support the platform*,"

and the frame of that patent, as the frame of the actual device, supports the platform planks by means of cross-beams or putlogs, laid in the lower U-shaped part of the frames. The suspended frame is mentioned specifically in its entirety in Claim 1, and it is also mentioned in the other claims of the patent. Thus, in Claim 2, line 3, is referred to as:

"Means for holding the clutches *constantly in*

*vertical alignment* and for carrying a load suspended therefrom."

In Claim 3 that element is referred to as:

"Means for holding the clutch *in vertical alignment* and for carrying a suspended load."

In Claim 4 it is referred to as:

"Two vertical rods having a rigid connection with one of the clutch boxes and a sliding engagement with the other, and holding the clutch boxes, and contained clutches *constantly in vertical alignment* at a changeable distance apart a cross connection between the rods for the support of the load."

In Claim 5 it is referred to as:

"Means for holding the clutches *constantly in vertical alignment*, and for carrying the load suspended therefrom."

In Claim 6, it is referred to as:

"Means for holding the clutch boxes *in vertical alignment* at varying distances apart and for carrying the load."

Thus in every claim that frame is made an essential element of the construction, and in every instance it is used to accomplish the same purpose as that of the patent in suit namely, to support the load, meaning the platform and the load thereon, and the hoisting mechanism. It supports the load, in exactly the same way as the device of the patent in suit; that is, by means of cross-beams or putlogs on the lower U-shaped ends of the frames, so as to support longitudinal planking laid on said cross-beams or putlogs to constitute a platform.

Every claim of that patent, as also the "Little Wonder" structure has its clutch-boxes in vertical alignment.

The insistence on this becomes marked when it is remembered that for the proper functioning of this structure these clutches must be in vertical alignment. If it were otherwise, the clutches would open and release the cable and the scaffold would drop. Respondent insisting on the necessity of the vertical alignment of the clutches, does this in the light of the use contemplated by him in connection with the combination shown in his first patent (see Figure 1 of that patent, record, p. 394), which, as appears, embodies the co-operative law of Henderson. There is no possible good in the arranging of the clutches in vertical alignment unless that alignment be maintained in respect to the cables, as is the case when the structures are in actual use. And this is alone possible by providing *a loose joint or hinge connection* between the cross-beams or putlogs and the U-shaped frames.

Any fixed or rigid connection (as in the Murray Patent) between the putlogs and frames, will incline the clutches towards the cables, and open the clutches and drop the scaffolds. But by *hinging* the connection in accordance with Henderson's co-operative law, a "secure and efficient" scaffold is provided as contemplated by the Henderson Patent, and a scaffold is provided that becomes safe and reliable to the workmen.

Whitney himself realized that the hoisting mechanism of the "Little Wonder," as shown in the second Letters Patent to him, No. 1,114,832, was the equivalent of the hoisting mechanism of his prior Patent No. 998,270, which shows the device of the "Whitney Scaffold Hoist" machine, for when he filed his application for the patent on the "Whitney Scaffold Hoist" machine, and presented Claim 22 (p. 226), he had in mind covering other con-

structions of hoisting machines than that shown in the last-named patent, because after specifying a scaffold, and corner frames provided with supporting rods, in their lower ends, and end-beams engaging the lower ends of the supporting frames, longitudinal beams laid on the end-beams, and supporting cables, he did not specify for a hoisting mechanism a construction in which a *drum* was used. He used the broader, more generic expression:

“And *controlling mechanism* carried by the frames for engagement with the cables *to regulate the vertical adjustment* of the scaffold.”

It would seem quite clear that if the first Whitney Patent No. 998,270 had been issued to Whitney with Claim 22, as presented, and a clutch device, such as shown in the second Letters Patent to Whitney No. 1,114,832, were placed upon the market, that such structure would clearly come within the terms of his proposed Claim 22, as originally presented, and be held to be the equivalent of the structure shown in the first Whitney Patent No. 998,270, which is substantially the same as that of the patent in suit. The proposed Claim 22 of the Whitney application was not rejected because it did not read honestly and fairly on the structure disclosed in the drawings and specifications. It was rejected because the device was anticipated by the Henderson Patent in suit.

Referring now to the testimony of the witness French in respect to the construction of the “Little Wonder” device, as shown in the actual exhibit offered in evidence, he states (record, p. 73), beginning with Q16, that he saw the “Little Wonder” machines installed on buildings arranged in the same way as the Henderson invention:

“As far as *the combination* of hoisting devices, outriggers, cables and clamps are concerned.”

"The hoisting device on the machine was placed *broadside to the building,*"

that is the same as the construction shown in the Henderson patent:

"The putlogs *ran through the frame* connecting one frame to the other."

"The scaffold frames *were supported on* the putlogs, those form the platform."

"The cables were secured to the outriggers or suspended from the outriggers and passed down through hoisting devices on the machine."

"Some of them (putlogs) were laid *loosely through*, just having a hole to allow the cable to pass through. Others were *through the frame* in a similar manner, only the putlogs being somewhat wider than the frames—that is, the bars or spacing of the bars that form the frame—so that the putlogs had holes bored through them to allow rods to pass through."

Then comes the significant statement:

"That *the rods were loose with respect to the holes in the putlogs.*"

By that means Whitney was enabled to produce that *loose-jointed hinged* connection between the frame and the putlogs, which is perhaps the most important feature of the device of the patent in suit.

Then, again, the witness testified that the:

"Hoisting devices *remain perpendicularly while the putlogs would slip or slant up and down* according to which machine is raised or lowered."

Again:

"The cables were *perpendicular when the hoisting devices were raised or lowered.*"

There again the respondent appropriates one of the main features of the Henderson Patent, which provides means for preventing any friction or chafing against the cables that would result if the cables were not kept in a perpendicular position in respect to the hoisting mechanism, which is alone possible by using the loose-jointed hinged connection.

"Q28. Was the cable perpendicular or otherwise with respect to the frames of the hoisting devices?

"A. *They were in line with the machine. Or, in other words, the machine would tilt to keep in line with the cable*" (record, p. 74).

That would be impossible if it were not for the fact that the putlogs were arranged *loosely* or in hinge connection with respect to the U-shaped frames. The witness testified, Q29, that he had seen machines of that kind, and arranged in that way in a number of different cities in 1914, one of them being in the Y. M. C. A. Building in Grand Rapids, Michigan. He had seen others in Columbus, Ohio, in Omaha, and Lincoln, Nebraska (record, pp. 74, 75).

Again, with the actual device, Plaintiff's Exhibit 16 before him, he testifies:

"42Q. Will you please produce some machines that you speak of as being 'Little Wonder' machines?

"A. I have some here.

"43Q. Will you produce the 'Little Wonder' machine?

"A. Yes, sir.

"44Q. Will you please describe briefly, with the aid of this exhibit, just how the frame is arranged, and putlog arranged in respect therewith?

"A. If this were the building line, the machine was set the same as this machine, *broadside* to the

face of the building, having a *wooden putlog passing through the frame*, extending to the other machine, connecting the two machines together, forming a support for the platform.

"45Q. And on what did the putlog rest?

"A. The putlog *rested on the bar forming the bottom portion* of the frame.

"46Q. How was the machine worked, or raised or lowered?

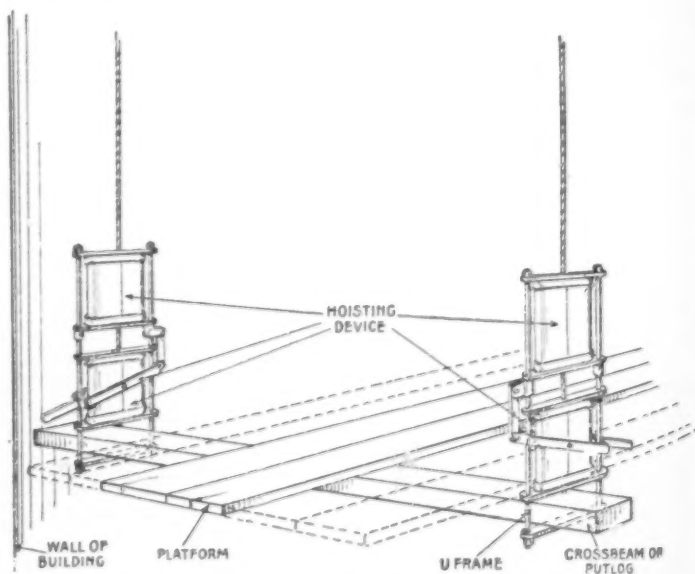
"A. The machine was operated with a handle or lever."

Photographs of the "Little Wonder" machine were offered in evidence and marked respectively Plaintiff's Exhibits 20, 21 and 22 (record, p. 81). The witness testifies that those photographs show the "Little Wonder" machines rigged with the putlog *run through the frame* of the machine, the putlogs being:

"At right angles to the building same as shown in the patent in suit."

Plaintiff's Exhibit 22 shows the "Little Wonder" machine with the covers off the clutches.

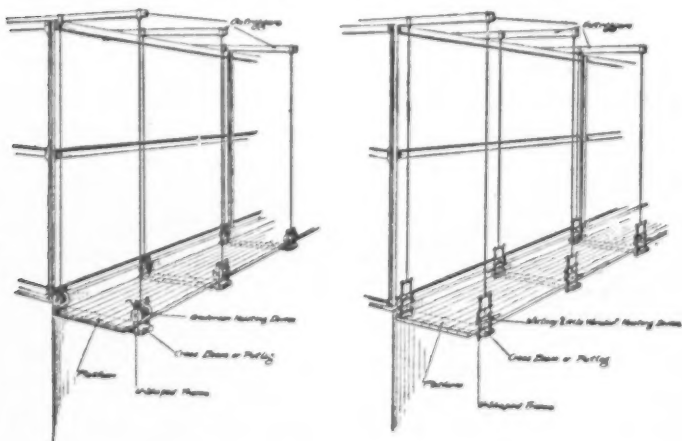
The following diagram shows two "Little Wonder" machines, each having a U-shaped frame and a hoisting device, and each U-shaped frame engaged by a cross beam or putlog. On the putlog platform planks are arranged.



No attempt was made by the respondents to offer any testimony to show that there was any mechanical difference in the general construction or operation between the "Little Wonder" machine, and that of the Henderson Patent in suit. The respondents made no effort whatever to deny the testimony of the petitioner's witnesses in respect to the construction, mode of operation, or result produced by the "Little Wonder" machine, and a comparison between those two structures demonstrate

that in both constructions there is a scaffold consisting in the combination of cross-beams, floor-pieces extending between such beams, a hoisting device associated with each of said beams, with the frame extending around the under side and upward of the cross-beams or putlogs, and hoisting mechanism supported on the frame that supports the platform, all co-operating to provide a flexible and hinged scaffold, with the hoisting mechanism independently operable.

This is somewhat indicated in the following diagram, which shows on the left-hand side, three pairs of Henderson frames supporting a platform, with the cross beams or putlogs loose-jointedly or hingedly connected with the U-shaped frames. On the right-hand side of the diagram are shown three pairs of "Little Wonder" devices with the cross beams or putlogs loose-jointedly or hingedly connected with the U-shaped frames. In both pictures the putlogs support the platform.



And the issue in respect to the "Little Wonder" machine tapers down to the question as to whether or not the substitution in the "Little Wonder" machine of a hoisting mechanism comprising two clutch boxes, in place of one clutch and a drum, avoids infringement, the other elements comprising a scaffold, supporting cable, cross-beam, floor-pieces supported upon the cross-beams, and *a frame supporting both the platform and the hoisting mechanism*, being the same in both cases.

There is nothing in the patent in suit that indicates that the particular and specific rotary movement of a drum or any other feature of a drum is in any way essential to the operation of the other elements of Claims 1 or 3; and the fact that the word "drum" was used in the claim, is certainly not of sufficient importance to limit the scope of the claim. In *Lake Shore v. National Car Brake Co.*, 110 U. S., 229, each of the claims refer to the several elements by *reference letters*, and there were decisions in the lower Courts that held that in such a case the claims were to be construed narrowly, but this Court overruled that proposition, and passed judgment upon the elements of the claims on their *merits*, and on the principles underlying their co-operation, and held:

"The bolt and the clevis perform the *same office* in the two structures, and the mechanical differences are *merely formal* and not substantial. The combination consists of the same four parts, differing only in form."

So the elements of the "Little Wonder" machine when in actual use differ from those of the Henderson Patent in suit only in form and not in substance.

In a well you frequently find a bucket supported on a

chain that is wound over a drum operated by means of a crank, and which may or may not have gearing attached thereto, and corresponding in a general way to the drum of the Henderson Patent; and in another well you find a pump-like structure, in which a valve is attached to the end of a rod, which is connected with a handle, the handle being moved up and down so as to force the water up through and out of the pump. Both may be interchanged and still perform the same functions with a result beneficially the same.

So, interchangeable levers and screws are equivalents (Turrell v. Spaeth, 3 Banning & Arden, 461); springs and weights (Imhaeuser v. Burek, 101 U. S., 647, 656); a mere handle and a lever (Corn Planter Patent, 23 Wall., 235); and a confined column of water and mechanism, when both are used to transmit vibratory motions (Blake v. Robertson, 94 U. S., 728, 732).

The respondents have not shown that it makes the slightest difference whether you use a drum or a clutch, such as is shown in the "Little Wonder" machine; they *both hoist the platform, and that is the main thing*. They are both supported on frames which have cross bars or putlogs loose-jointedly connected with their lower ends to provide a *flexible* connection between the frame and the putlogs. In both cases, the hoisting device is connected with cables, and in both cases the cables are connected with overhanging devices or outriggers.

A drum to hoist its frame on a cable functions in the sense of the Patent Law in the same manner as clutches to hoist their frame on a cable. A drum, unless it clutches the cable, would not be able to raise its frame on the cable. With every turn of the drum a new purchase or clutch action is established. Such clutching may be a continuous action on relatively small parts of the cable

at the time, as the intermittent clutch action of a separate clutch. But just as a circle is composed of innumerable small straight lines (*Ives v. Hamilton*, 92 U. S., 431), so the circular clutching action takes place on adjacent straight line portions of the cable. Superposed clutches, as in the "Little Wonder," act on separate straight line portions in the same manner. The element of time or separating distance does not avoid the fact that the same elementary mechanical principle exists. The means are the same. The cable is clutched permanently to the drum, and while the rotating of the drum provides only the intermittent hold, so one clutch acts to hold the cable, while the other provides the intermittent hold. But the dominant fact is that when both the "Henderson" and "Little Wonder" frame reach the level desired, they both support the platform to the cable by their clutch actions. They both raise the platform on the cable—they both lower the platform on the cable. They perform no other function, but to carry out that element of the Henderson co-operative law, and in identically the same way, in the sense of the Patent Law.

All the petitioner asks is that the rule of this Court, in *Machine Co. v. Murphy*, be applied to the facts of this case. In that case this Court stated (97 U. S., 120, 125):

"Except where form is of the essence of the invention, it has but little weight in the decision of such an issue, the correct rule being that, in determining the question of infringement, the Court or jury, as the case may be, are not to judge about similarities or differences by the names of things, but are to look at the machines or their several devices or elements *in the light of what they do, or what office or function they perform*, and how they perform it, and to find that one thing is substantially

the same as another, if it performs substantially the same function, always bearing in mind that devices in a patented machine are different in the sense of the patent law when they perform different functions or in a different way, or produce a substantially different result."

"Nor is it safe to give much heed to the fact that the corresponding device in two machines organized to accomplish the same result is different *in shape or form the one from the other*, as it is necessary in every such investigation, to look at the mode of operation or the way the device works, and at the result as well as at the means by which the result is attained."

"Inquiries of this kind are often attended with difficulty; but if special attention is given to *such portions of a given device as really does the work* so as not to give undue importance to other parts of the same which are *only used as a convenient mode of constructing the entire device*, the difficulty attending the investigation will be greatly diminished, if not entirely overcome, *Cahoon v. Ring*, 1 Cliff, 620."

"Authorities concur that the substantial equivalent of a thing, in the sense of the patent law, is the same as the thing itself; so that if two devices do the same work in substantially the same way, and accomplish substantially the same result, they are the same, even though they differ in name, form, or shape. *Curtis Patent* (4th Ed.), Section 310."

And we respectfully urge this Court:

"Not to judge about similarities or differences by the names of things,"

that is, whether the hoisting mechanism is called by the name of *drum* in the patent, or

"A *controlling mechanism* carried by the frames for engagement with the cables to regulate the verti-

cal adjustment of the scaffolds" (Whitney's patent application);

and we respectfully ask this Court to give special attention to such portions of the elements of Claims 1 and 3 of the patent *as really do the work*, and that undue importance be not given to the difference in form of the respective hoisting mechanism.

To apply the language of *Machine Co. v. Murphy*, the device of the claims of the patent in suit, the "Whitney Scaffold Hoist" machine, and the "Little Wonder"

"Do the same work in substantially the same way and accomplish substantially the same result" (and) "they are the same even though they differ in shape, name or form."

Here again comes to the foreground Henderson's co-operative law as an entity or unit. This is not a "drum," nor is it any other single element. But it is that principle or mental concept, that association of ideas in functional terms which embraces the independently operable hoisting devices with a platform flexible throughout its length and breadth, having the putlogs loose jointedly resting on the frames, and with the hoisting mechanisms *in vertical alignment* with the cables to follow the cables upwardly or downwardly without injury to the cables or without slipping therefrom. That is the *whole* invention. That the respondent has taken. That "the letter killeth, the spirit quickeneth" is as true in interpreting a patent claim as it is in interpreting the Scripture or a statute, and though the letter of the claim may be avoided, the charge of infringement may nevertheless be made out (*Westinghouse v. Boyden*, 170 U. S., at p. 568; cases cited).

As stated by this Court in Paper Bag case, 210 U. S., 405-418:

*"The principle of the invention is a unit and invariably the modes of its embodiment in concrete invention may be numerous and different from each other. Robinson on Patents, Section 485."*

It is even a question whether the device of the Henderson Patent is not primary to a certain extent. Henderson was the first person to contrive and produce a suspended scaffold, so constructed as to support masons working thereon with their working material and yet yield so as to compensate for any uneven adjustment of the scaffold vertically and longitudinally. He did that by the employment of elements in a *new mode of operation* embodied in a form by means of which a *new result* is produced. He was a pioneer to that extent, at least, and the first in the art to produce such a device; and consequently is entitled to a reasonably broad scope of equivalents.

An inventor who produced such beneficial results, results so widely recognized by builders throughout the country, would receive very little return for his labor, his genius, and his industry if, when awarded a patent, the patent could be disregarded by any infringer who uses the same co-operative law, but uses a hoisting mechanism comprising two clutches, and another one using a cylinder with a piston; and another use a screw instead of a drum; and another use something else; all obvious equivalent devices.

"In *Ives v. Hamilton*, 92 U. S., 426, the patent in suit was for an improvement in sawmills. The defendant had made a certain change in some of the mechanical connections. This Court in holding that

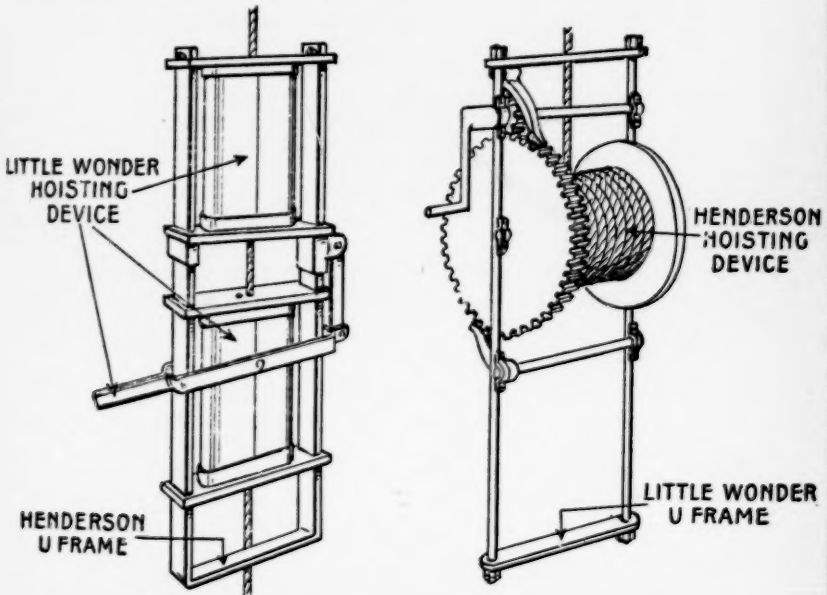
such change did not avoid infringement of the patent said, page 431 :

“The attaching of the lower end of the saw to the pitman below the cross-head instead of above it, and thereby getting the same movement as before by reversing the motion of the crank, is no change in principle. This is too obvious for discussion. The combination of the two things in the defendant’s mill—namely, the crooked guides at a point removed from its centre of motion (both being calculated to give to the saw the precise rocking or vibratory motion desired)—is a close copy of the plaintiff’s invention; quite as close as is usually made by those who attempt to evade a patent whilst they seek to use the substance of the invention.”

“In *Hoyt v. Horne*, 145 U. S., 302, the patent was for a rag engine for paper-making. The machine shown and described in the patent comprised a certain horizontal partition or mid-feather which involved circulating the pulp in vertical planes, and the claims in terms called for such construction. In the defendant’s machine the partition or mid-feather was made vertical, instead of horizontal, so that the pulp circulated in a horizontal instead of a vertical plane. In holding that the defendant’s machine nevertheless infringed the patent, this Court, after referring to a certain additional function claimed to be performed by the defendant’s machine, said, page 309 :

“ ‘This may be true, and defendant’s engine may be in this particular an improvement upon the other; but he has none the less succeeded in appropriating all that was of value in the Hoyt device, viz., the beater-roll at the end of the tub, extending across its entire width, and the circulation of the pulp in vertical planes at the only point where such circulation is of value. The substitution of a vertical for a horizontal mid-feather at the inoperative end of the tub is merely the use of an old and well-known mechanical equivalent, and obviously intended to evade the wording of the claims of the Hoyt patent.’ ”

The following cuts show diagrammatically, on the left-hand side a Henderson U-frame with the "Little Wonder" hoisting device, and on the right-hand side a "Little Wonder" frame with a Henderson hoisting device, demonstrating beyond a peradventure the interchangeability of the hoisting device of the "Little Wonder" machine and that of the patent in suit.



Interchangeability or non-interchangeability of parts has always been regarded by this Court as an important test in determining the question of infringement (*Miller v. Eagle Mfg. Co.*, 151, U. S., 208; *Prouty v. Ruggles*, 16 Peters, 336; *Brooks v. Fiske*, 15 Howard, 212; *Eames v. Godfried*, 1 Wall., 78).

### *The Opinions of the Courts Below.*

The District Judge, after having heard the testimony of the case given in open court, in his opinion stated as his conclusion:

"I think the only question is whether the structures introduced as being manufactured by the defendant or put out are infringements. This Little Wonder machine is, when you look at it, entirely different in appearance. There is no such thing as the rotatable drum, but the patent lays no particular stress upon that particular kind of mechanism to supply the hoisting power—that is to say, it does not appear that it must be a rotating drum and nothing else" (record, p. 248).

And also said:

"Such a drum is used only as a convenient mode of constructing the entire device."

And then finally said:

*"There is nothing in the art that forbids the discharge of that function by some other equivalent. It seems to me that that is just what is done here. Instead of using the drum there is a clear equivalent introduced, and I think Henderson's patent is entitled to liberality in this regard."*

The gist of the Henderson invention lies in the conception of a loose-jointed or flexible connection between the frame and the putlogs or cross beams connected with that frame and supporting the scaffolds or platform.

The loose jointed or flexible or stirrup connection permits the frame to assume a truly perpendicular position relative to the cable even when the cross beam is somewhat out of level. And that is true, irrespective of what kind of a hoisting mechanism is used in the device. In-

deed, the hoisting mechanism may be entirely removed from all their supporting frames and still the supporting frames and the cross beams would function in the manner intended and yield to any tilting of the cross beams that supports the platform, and consequently compensate for any irregularity in the platform itself.

No matter what kind of a hoisting device is used the supporting frame and the cross beams will operate identically the same in respect of such loose-jointed or stirrup connection. In other words, the flexible, loose-jointed or stirrup connection between the hoisting frame and the putlogs that support the platform *does not know what kind of a hoisting device is being used with it*. It is true, there must be some kind of a hoisting device to raise or lower the putlogs and platform, but the type or kind is not material. For that reason the District Judge was manifestly correct in finding the hoisting mechanism of the "Little Wonder" machine to be equivalent of the drum of the Henderson patent when used in co-operation with the other elements specified in Claims 1 and 3 of the patent in suit.

On the other hand, the Court of Appeals stated (record, p. 270):

"Any substantial patentable advance shown in this patent bears a particular relation to the drum mechanism of the claims not to be found in its relation towards the other mechanism under consideration."

We have already shown that the form of drum mechanism does not bear any "particular relation" to the other mechanism of the claims in issue, a fact that was clearly recognized by the District Judge. And it was because of that erroneous assumption, the Court of Appeals lim-

ited Claims 1 and 3 of the patent in suit to a construction in which drum mechanism was the essential element. The hoisting mechanism of the "Little Wonder" does not in any way change the function of or result produced by the loose-jointed connection between the hoisting frame and the putlogs, and therefore it follows that the hoisting mechanism of the "Little Wonder" machine is merely a substitute and an equivalent for the hoisting mechanism of Claims 1 and 3 of the patent in suit (*Seymour v. Osborne*, 11 Wall., 516, 542, 548; *Winans v. Denmead*, 15 How., 330; 14 L. Ed., 717).

The Court of Appeals stated:

"We do not find in the prior art or in prior use any operative scaffold of this general nature which seems to embody *all of the elements present in Henderson's combination*" (p. 267).

and having found that, the Court should have decided that each element of the *combination* was entitled to a reasonable range of equivalents sufficient to include the "Little Wonder," when used in accordance with Henderson's combination.

The Court of Appeals refers to the file wrapper of the Henderson application and stated that after the rejection of his claim the patent was finally granted to Henderson on the representation by Henderson "that the connection between U-shaped bar and the cross beams is absolute and positive and no rivets, bolts or other auxiliary means are employed."

When Henderson's attorney spoke of rivets, bolts and other auxiliary connecting means, he was differentiating the Henderson invention from the Murray patent, which showed the putlogs *rigidly* secured to the ends of the frames of the hoisting mechanism, and in the Murray construction the whole weight of the platform rested

upon these rivets, as the rivets connected the putlogs to the frames, without, however, the putlogs resting on the frames. But Henderson was the first to place the putlog *into the frame*, so that the putlog would rest *on the frame*, and thereby give a *secure* connection. The specimen of the "Little Wonder" machine that the Court of Appeals refers to has its putlog placed *within the frame and resting upon the lower part* thereof. In that particular structure wherein the rods of the "Little Wonder" pass through larger holes in the putlog, it was necessary to remove the nuts and the lower piece of the U-shaped frame in order to assemble the parts, but the weight of the putlog was on the bottom of the U-shaped frame, and not only on the connecting rivets as in the Murray patent. The Court of Appeals obviously misconstrued the language of Henderson's attorney and compares the "rivets" for connecting the hoisting machine frame and the cross bars, with "the rods and cable" of the "Little Wonder" machine. It is obvious that the "rods and cable" of the "Little Wonder" machine have no relation whatever to a permanent or rigid connection between the hoisting machine frame and the cross beams. But as a matter of fact, there is no such construction or arrangement in the "Little Wonder" machine. The holes in the cross beams through which the cable or rods pass are wide enough to permit the cross bars to tilt and then to adjust themselves in particular relation to the cable. In other cases the putlogs enter between the rods of the frame (record, p. 75, Q44; p. 107, XQ35).

Where an invention is valuable and the claims are clear the patent should not be overthrown because of a presumption based upon the tentative debates between urgent and vociferous attorneys and reluctant and laconic examiners (*Vulcanite Co. v. Davis*, 102 U. S., 222).

The principle applicable is well stated by the Court of Appeals for the Sixth Circuit in *Vrooman v. Penhollow*, 179 Fed., at p. 306, where the Court says, by Judge SEVERENS:

"A more definite and concrete statement of the principle was made by Judge Sanborn in delivering the opinion of the Eighth Circuit Court of Appeals, in the case of *J. L. Owens Co. v. Twin City Separator Co.*, 168 Fed., 259, 93 C. C. A., 561, where he said:

" 'If a patentee acquiesces in the rejection of his claim on reference, he may be estopped to maintain that an amended claim covers the combinations shown in references, or that it has the breadth of the rejected claim, *but he is not estopped from claiming and securing by the amended claim every improvement and combination which he has invented and which was not disclosed by those references.*'

"We think this is a perfectly correct statement of the law, and would be equally so of a case where the objection is stated by the Examiner without references and the objection is seen to have been leveled at another matter than that involved in the alleged estoppel. It is hardly to be believed that the Examiner himself intended to cut off all other forms than such as should comply literally with the words of the claim."

And at pages 302-3 of 179 Fed., the Court says:

"The inventor is required by the statute to point out the best mode in which he has contemplated the application of the principle of his invention. But this does not preclude him from claiming any other mode which embodies his principle. Mr. Walker, in his work on Patents (4th Ed., Sec. 115), in commenting on this provision of the statute, says:

" 'The second provision cannot mean that every inventor must infallibly judge which of several forms of his machine will eventually be found to work best,

for, if it means that, it requires what is often impossible; requires the inventor to foresee the ultimate effects of new and comparative untried causes.'

"This is elementary. It is the foundation of the doctrine concerning equivalents. The case of *Winans v. Denmead*, 15 How., 330, 14 L. Ed., 717, is a pertinent illustration. There the applicant had described his invention as being one of a body for a car, and gave, as a form representing his inventions, 'the frustum of a cone,' an inverted cone, and he assigned his reasons for adopting this form. He said that thereby 'the force exerted by the weight of the load presses equally in all directions, and does not tend to change the form thereof, so that every part resists its equal proportion,' etc. Notwithstanding he had represented his invention in this form and assigned his reasons for it, the Court held that he was not restricted to this form, and that his patent covered any other form constructed substantially *upon the principle of his invention*, and upon this ground further held that car bodies constructed upon his principle, but varying therefrom in that, instead of employing the circular form of a cone, the car bodies were built in an octagonal or quadri-lateral form, evidently did not possess in like extent the peculiar advantages which the inventor had contemplated."

***Conclusion.***

From the foregoing analysis of the case we submit it conclusively appears that the patent in suit is a valid one, and that Claims 1 and 3 have been infringed by the respondent in making and selling the "Little Wonder" as well as the "Whitney Scaffold Hoist" machine, for use in the Henderson combination.

Respectfully submitted,

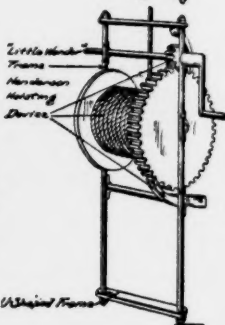
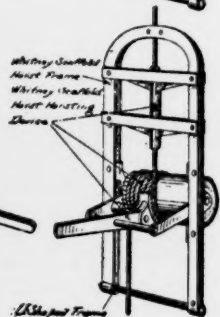
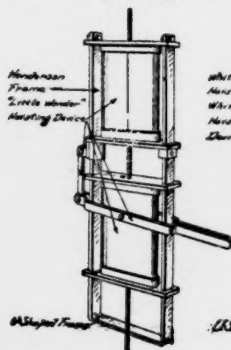
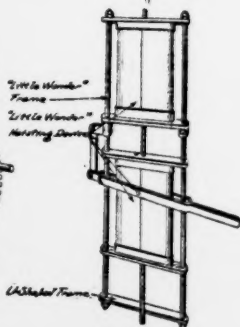
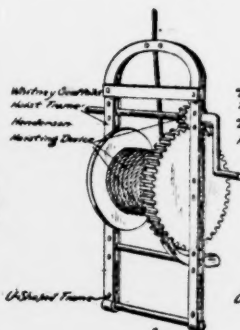
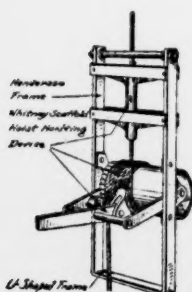
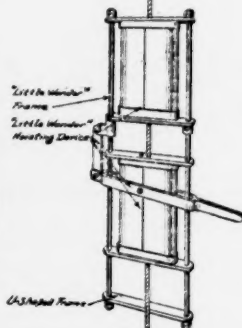
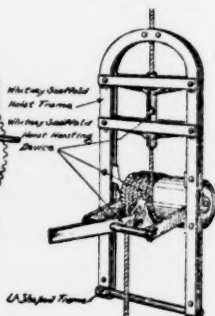
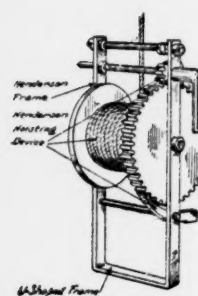
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# Interchangeability of Hoisting Devices

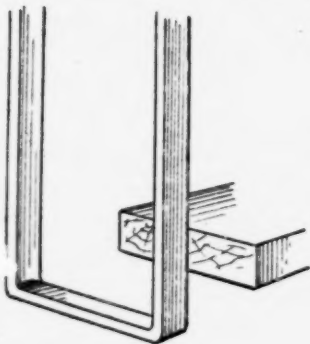
Henderson

Whitney Scaffold  
Hoist

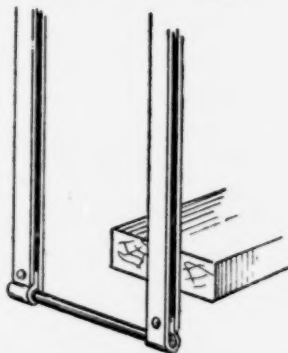
"Little Wonder"



*Henderson  
U-Frame*



*Whitney Scaffold  
Hoist Machine Frame*



*"Little Wonder"  
U-Frame*

